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syndrome. Dietary habits are acknowledged to be in close relationship with metabolic derangements among many risk factors. In this study, we aimed specifically to investigate whether large evening meals are associated with metabolic syndrome parameters. Methods: We performed a cross-sectional analysis on data from 6,308 participants from the Fourth Korean National Health and Nutrition Examination Survey. The National Cholesterol Education Program criteria were used in the definition of metabolic syndrome. Subjects were evaluated for metabolic syndrome and its components across different amount of evening intake. Subjects were evaluated again after stratification according to gender, age group, total calorie, body mass index and medical treatment of hypertension and diabetes. Results: No significant relationship was found between the amount of evening intake and metabolic syndrome. Among metabolic syndrome components, we found a statistically nonsignificant increase in the risk of central obesity with increasing evening calorie intake. Subjects being treated for hypertension showed a 2.03 fold increase in the risk of metabolic syndrome in the group with largest evening intake compared to the group with smallest evening intake (p <0.05). No particular relationship was observed in subjects being treated for hypoglycemia. Conclusion: Our research shows that the risk of metabolic syndrome or its components does not differ between evening intake calories. Further studies on dietary habits or dietary content, rather than the calorie per se, are needed for better prevention of metabolic derangements.

Conflict of Interest: None

Funding: No Funding

739 accepted poster

COMPARISON OF THE SLIMMING WORLD EATING PLAN AND DIOGENES INTERVENTION DIETS USING A HEALTHY DIET INDEX


Abstract Text: Introduction. This study examined diet composition and weight-loss maintenance in women consuming low-fat, lower energy density diets during 6 months after weight-loss. Methods. Weighed food records and body weights were compared in 117 overweight/obese members of a commercial weight management programme (CWMP) with 277 participants in the DiOGenes study investigating high/low protein (HP/LP), and high/low glycaemic index (HGI/LGI) diets and healthy eating advice in weight-control. All diets were ad libitum. Diet quality was estimated by Healthy Diet Indicator (HDI) scores. Results. Compared to the other DiOGenes diets, the CWMP diet was lower or similar for percentage energy from fat, and higher or similar for percentage energy from protein and carbohydrate. Energy density was lower, and fruit and vegetable intake was higher (both P<0.002). HDI score was similar to the two LP diets and higher than the other diets (P<0.001). Red and total meat consumption was higher than the two LP diets and similar to the other diets. Mean weight changes, as % initial weight, were significantly different across groups (P<0.005) -0.53, -0.17, +2.47, -1.73, +0.12 and +1.18 (CWMO, HPHGI, LPHGI, HPLGI, LPLGI) and healthy eating advice respectively). Conclusion. People following the CWMP reported diets that were generally as, or more, healthy than the DiOGenes intervention diets. Higher protein diets could be refined by substituting some red meat with other protein sources. 

Conflict of Interest: None

Funding: EC Framework 6 DiOGenes project (contract #: Food-CT-2005-51984).

DECREASE IN PLASMA PROTEIN MARKERS OF OXIDATIVE STRESS AND INFLAMMATION IN OVERWEIGHT/OBSESE TYPE 2 DIABETICS AFTER SUPPLEMENTATION WITH BILBERRY EXTRACT

F. Campbell, P. Nicoll, F. Nicol, M. Reid, L. Cantlay, K. M. Moar, M. Cruickshank, N. Hoggard

Abstract Text: Introduction: Dietary strategies for alleviating health complications associated with type 2 diabetes are being pursued as alternatives to pharmaceutical interventions. Berries such as bilberry are enriched in anthocyanins with reported anti-oxidant and anti-inflammatory properties. This study investigated whether three weeks supplementation with a concentrated bilberry extract would alter markers of inflammation and oxidation in the plasma proteome of overweight/obese type 2 diabetics compared to pre-supplementation samples. Methods and Results: Mean age 63.6 ±11.2 years, BMI 25.9 ±5.2, HbA1c 7.1 ±1.7%, and 27% were on metformin. 50 weeks supplementation with a concentrated bilberry extract would alter markers of inflammation and oxidation in the plasma proteome of overweight/obese type 2 diabetics compared to pre-supplementation samples. Methods and Results: Mean age 63.6 ±11.2 years, BMI 25.9 ±5.2, HbA1c 7.1 ±1.7%, and 27% were on metformin. The main finding was a decrease in IL-1B, IL-10 and CRP, and an increase in IL-6. Conclusion: Bilberry supplementation for 50 weeks resulted in changes in plasma protein markers of oxidative stress and inflammation.

Conflict of Interest: None

Funding: None

740 accepted poster

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